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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,322	04/06/2006	Marc Chilla	FA1225USPCT	3634

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WILMINGTON, DE 19805

EXAMINER
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FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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05/21/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,322	<b>Applicant(s)</b> CHILLA ET AL.	
	<b>Examiner</b> William P. Fletcher III	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-9, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-9, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. The amendment and remarks filed March 9, 2009, are noted with appreciation.
2. Claims 2-9, 11, and 12, remain pending.

***Terminal Disclaimer***

3. The terminal disclaimer filed March 9, 2009, is noted. It appears proper, but is awaiting formal review by a paralegal.

***Response to Arguments***

4. The objection to claims 5-12 is withdrawn in view of the amendment.
5. The rejection under 35 USC 112, 2nd Paragraph, is withdrawn in view of the amendment.
6. The obviousness-type double patenting rejection is maintained pending approval of the terminal disclaimer (see above).
7. Applicant's arguments with respect to the prior art rejections are not persuasive.
  - A. The reason or motivation to modify a reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. See MPEP 2144(IV). As clearly stated in the prior Office action, Kiehl teaches that non-leaching aluminum pigments, chromated or encapsulated with a silicon-oxygen network, *advantageously* reduce/eliminate reaction with and oxidation (i.e., corrosion) of the pigments by water, making such encapsulated pigments better suited for

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incorporation and long-term stability in water-based coatings (see Kiehl's abstract and section 2). The strongest rationale for combining references is recognition, expressly or impliedly in the prior art, that some advantage or expected beneficial result would have been produced by their combination. See *In re Sernaker*, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983). The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

B. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). As noted above, the combination of Schlaak with Kiehl is made in view of the clear teaching of the advantages taught by Kiehl. Consequently, this argument is not persuasive.

C. Applicant argues that it is "the combination of aluminum pigment with (1) the solids content, (2) the ratio by weight of pigment content to resin solids content, and (3) the composition of the pigment content" that makes possible the

"low UV transmission when producing multilayer coatings in light metallic color shades, and only then do these multilayer coatings have the required technological properties." This position is noted, but it is the Examiner's position that the claimed invention remains obvious over the cited prior art. As noted above, the combination of Schlaak with Kiehl would have been motivated by the advantages taught by Kiehl. Since the combination of Schlaak with Kiehl and Falcoff teaches or suggests all of the claimed process steps and materials (in particular, the Examiner notes that Kiehl precisely teaches Applicant's claimed non-leafing aluminum pigment), and since UV transmission is an inherent physical property of the film, it is the Examiner's position that the film of Schlaak in view of Kiehl and Falcoff inherently possesses the claimed UV transmission. Further, Applicant asserts that the examples disclosed in the specification support the criticality of the synergistic effect of the combination of elements described above. The Examiner disagrees. The specification clearly states that the examples "differ from one another only in the nature and quantitative proportion of the non-leafing aluminum pigments" and provide no clear nexus between all of the elements in the combination — apart from the type and relative concentrations of pigment — and the claimed UV transmission properties. In other words, Applicant argues that the claimed UV transmission is only possible as a result of the synergistic effect of the combination of the aluminum pigment with the solids content, the ratio by weight of pigment content to resin solids content, and the composition of the pigment content, yet addresses only the type

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and relative amounts of pigments — not the solids content or the ratio of pigment solids to resin solids.

***Claim Objections***

8. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claims 2-9, 11, and 12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schlaak (US 5,976,343 A) in view of Kiehl et al. (*Progress in Organic Coatings* 37 (1999) 179-183) and Falcoff et al. (US 4,403,866 A).

Schlaak teaches a process for the production of a multi-layer coating on a substrate comprising the successive steps of: applying a base coat layer to a pre-coated (EDC primer) substrate; applying a clear coat layer onto the base coat layer; and jointly curing the base coat and clear coat layers (abstract).

With specific respect to claims 2 and 7-9, Schlaak teaches that the base coat layer includes two layers, together totaling 17-45 microns thick (abstract). The first base coat layer is a water-borne metallic base coat that is 'modified' within the context of applicant's disclosure (see 17:6-18:12 of the specification) because it contains an admixture component (abstract and 3:40-7:65). The second base coat layer, as noted above, is a water-borne metallic base coat that is 'unmodified' within the context of applicant's disclosure (see 17:6-18:12 of the specification) because it does not contain an admixture component (abstract and 3:40-7:65). Schlaak's range of 17-45 microns overlaps applicant's claimed range of 10-30 microns. In the case where a claimed range overlaps a range disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP 2144.05(I)). Further, Schlaak expressly teaches a solids content of 15-30 wt.-% (6:26-29).

Schlaak further discloses that the base coat layer(s) has/have a ratio, by weight, of pigment content to solids content of 0.03:1 to 3:1, preferably 0.06:1 to 0.6:1 (6:25-35), which encompasses applicant's claimed range of 0.3:1 to 0.45:1. In the case where a

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claimed range overlaps or lies within a range disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP 2144.05(I)). The base coat layer(s) may contain 'any conventional pigments,' with aluminum metal pigments explicitly disclosed (5:30-42). The claims recite '0 to 10% by weight of at least one pigment different from aluminum pigments,' which reads on no pigment other than the aluminum pigment. Nevertheless, Schlaak teaches that pigments include 'inorganic and/or organic coloured pigments and/or effect pigments and optionally fillers' (5:30-42, emphasis added). It is the examiner's position that this teaching by Schlaak is inclusive of at least one pigment different from aluminum pigments. Lastly, Schlaak does not explicitly teach that the multi-layer coatings are in 'light metallic color shades,' as claimed (see above). Nevertheless, it is the examiner's position that Schlaak's disclosure of 'any conventional pigments' is inclusive of multi-layer coatings in any shade, including those that are considered 'light metallic color shades.'

Schlaak does not teach: (i) that the pigment content consists of 90 to 100% by weight of at least one non-leafing aluminum pigment with a platelet thickness of over 100 to 500 nm; (ii) that the coating has the claimed brightness L\*; (iii) that at least 50% by weight of the non-leafing aluminum pigment(s) is/are passivated by chromating and/or coated with a silicon-oxygen network; and (iv) that the base coat layer has the claimed UV transmission.

With respect to (i) and (iii), Kiehl teaches aluminum pigments encapsulated (i.e., coated) with a silicon-oxygen network. Encapsulating the aluminum pigments advantageously reduces/eliminates reaction with and oxidation (i.e., corrosion) by



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water, making such encapsulated pigments better suited for incorporation and long-term stability in water-based coatings (abstract and section 2). Kiehl also teaches that such pigments may also be chromated for the same purpose (abstract and section 2). Although Kiehl does not explicitly refer to the pigment as a 'non-leafling aluminum pigment,' it is the examiner's position that Kiehl's pigment is, indeed, a non-leafling aluminum pigment within the context of applicant's disclosure (see 9:27-10:26 of the specification).

It would have been obvious to one of ordinary skill in the art to modify the process of Schlaak so as to utilize, as the aluminum pigment in the water-based base coat layer, chromated and/or silicon-oxygen network-encapsulated aluminum pigments. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of advantageously imparting corrosion-resistance to the particles, thereby improving their long-term stability in the water-based coating. It would have been further obvious to one of ordinary skill to utilize the chromated and/or encapsulated aluminum pigments as 100% (i.e., at least 50%) of the aluminum pigment in the base coat layer, as doing so would maximize the corrosion resistance and long-term stability of the coating.

As noted above, the disclosure of Schlaak is inclusive of the aluminum pigment's being the only pigment present (i.e., 100% by weight). Nevertheless, it is the examiner's position that the concentration of a pigment in a coating composition is a result-effective variable. The pigment must be present in an amount sufficient to achieve the desired pigmentation or effect, but not so much that it adversely effects

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coating characteristics such as viscosity, flowability, uniformity, etc. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed concentration of aluminum pigment, it would have been further obvious to one of ordinary skill in the art to modify the process of Schlaak in view of Kiehl so as to optimize the pigment concentration by routine experimentation (MPEP 2144.05(II)). The examiner further notes that generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical (MPEP 2144.05(II)).

While none of the cited references explicitly state that the aluminum pigment has a platelet thickness of over 100 (i.e., greater-than 100) to 500 nm, it is the examiner's position that platelet thickness is a result-effective variable as well. The pigment must be thick enough to allow for the proper orientation in the coating to give the desired pigmentation effect, but not so thick as to adversely effect coating characteristics and pigmentation effects. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed platelet thickness, it would have been further obvious to one of ordinary skill in the art to modify the process of Schlaak in view of Kiehl so as to optimize the pigment platelet thickness by routine experimentation (MPEP 2144.05(II)).

With respect to (ii), Falcoff teaches that, in a pigmented coating composition (i.e., paint), any desired  $L^*$  value may be achieved by selecting the proper amount of colorants, binder, and optional ingredients according to well-known principles (2:48-3:40 and 5:30-35). This disclosure clearly indicates that  $L^*$  is a result-effective variable, the

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optimization of which is well-within the level of skill of one of ordinary skill in the art. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed  $L^*$  value, it would have been further obvious to one of ordinary skill in the art to modify the process of Schlaak in view of Kiehl so as to optimize the  $L^*$  by routine experimentation according to known principles (MPEP 2144.05(II)).

Finally, with respect to (iv), UV transmission is a physical property of the coating. Since the cited prior art teaches Applicant's claimed coating materials and method, it is the Examiner's position that the coating thereof inherently possesses these properties. Applicant has provided no evidence establishing that the coating of the prior art does not/cannot possess these properties.

With respect to claim 3, Schlaak teaches that the modified base coat layer is applied in a thickness of 10-30 microns and that the unmodified base coat layer is applied in a thickness of 7-15 microns (abstract). Both of these ranges overlap the claimed ranges of 5-20 microns and 2-10 microns, respectively. In the case where a claimed range overlaps a range disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP 2144.05(I)).

With respect to claim 4, Schlaak teaches that the modified base coat layer may be applied by electrostatic high-speed rotary spraying and that the unmodified base coat layer may be applied by compressed air spraying (i.e., pneumatically spray-applied) (9:7-29).

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With respect to claim 5 and 6, Schlaak teaches that the modified base coat contains an admixture component that imparts primer surfacer properties, specifically polyurethane resin (3:40-7:65).

With respect to claim 11, Schlaak teaches that the coating layers may be applied to "automobile car bodies or parts thereof" (8:57-60).

With respect to claim 12, the process of this combination of references inherently results in the claimed article, absent evidence to the contrary.

### ***Double Patenting***

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 2-9 and 11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-4 of copending Application No. 10/950,616. Although the conflicting claims are not identical, they are

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not patentably distinct from each other because the subject matter of the instant claims fully encompasses that of the co-pending claims such that, in practicing the process of the co-pending claims, one necessarily practices the process of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Sunday, 5:00 AM - 12:00 PM and Monday through Friday, 5:00 AM - 3:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/  
Primary Examiner, Art Unit 1792

May 18, 2009